

## AMENDMENTS

Claims 1-14 (canceled)

15. (Currently Amended) A system for diagnosing a fault, the system comprising:
- a knowledge base including a plurality of fault diagnoses and fault symptom queries, wherein each said fault symptom query includes potential responses and images that correspond to the potential responses;
  - a decision tree module including a decision tree having a plurality of decision points each corresponding to one of the fault symptom queries and a plurality of resolution points each corresponding to one of the fault diagnoses, wherein each said potential response in the decision tree indicates one of the decision points or one of the resolution points and one of said decision points is identified as a starting decision point; and
  - a user interface module in communication with said decision tree module, said knowledge base and a user access device, said user interface module including instructions to implement a method comprising:
    - designating the starting decision point as the next decision point;
    - transmitting the fault symptom query corresponding to the next decision point to the user access device;
    - receiving a reply including one of the potential responses;
    - continuing said transmitting the fault symptom query and receiving a reply until said one of the potential responses indicates one of the resolution points, wherein if said one of the potential responses indicates one of the decision points then said one of the decision points is designated as the next decision point; and
    - transmitting the fault diagnosis corresponding to said one of the resolution points to the user access device; and
    - receiving all of the resolution points and comparing the fault diagnoses to illustrative images associated with each of the resolution points in order to traverse the decision tree.

16. (Previously presented) The system of claim 15 wherein said fault diagnoses include diagnostic images.

17. (Previously presented) The system of claim 15 wherein said fault diagnoses include a description of the fault.
18. (Previously presented) The system of claim 15 wherein said fault diagnoses include a likely cause of the fault.
19. (Previously presented) The system of claim 15 wherein said fault diagnoses include recommended remedial actions.
20. (Previously presented) The system of claim 15 wherein a user accessing the user access device is a customer.
21. (Previously presented) The system of claim 15 wherein a user accessing the user access device is a customer support representative.
22. (Previously presented) The system of claim 15 wherein the fault relates to a technical product.
23. (Previously presented) The system of claim 15 wherein the fault relates to a technical service.
24. (Previously presented) The system of claim 15 wherein the user access device is a personal computer.
25. (Previously presented) The system of claim 15 wherein the communication between the user interface module and the user access device is via the Internet.
26. (Previously presented) The system of claim 15 wherein the fault is a defective circuit board.
27. (Currently Amended) The system of claim 26 wherein the fault symptom query is directed to a determination of what type of ~~void~~-defect the defective circuit board contains.

28. (Currently Amended) A method for diagnosing a fault, the method comprising:  
identifying a starting decision point on a decision tree, wherein the decision tree includes a plurality of decision points each corresponding to a fault symptom query and a plurality of resolution points each corresponding to a fault diagnosis, wherein each said fault symptom query includes potential responses and images that correspond to the potential responses and each said potential response in the decision tree indicates one of the decision points or one of the resolution points;  
designating the starting decision point as the next decision point;  
transmitting the fault symptom query corresponding to the next decision point to a user access device;  
receiving a reply from the user access device including one of the potential responses;  
continuing said transmitting the fault symptom query and receiving a reply until said one of the potential responses indicates one of the resolution points, wherein if said one of the potential responses indicates one of the decision points then said one of the decision points is designated as the next decision point; and  
transmitting the fault diagnosis corresponding to said one of the resolution points to the user access device; and  
receiving all of the resolution points and comparing the fault diagnoses to illustrative images associated with each of the resolution points in order to traverse the decision tree.

29. (Previously presented) The method of claim 28 wherein the fault diagnoses include diagnostic images.

30. (Previously presented) The method of claim 28 the fault diagnoses include a description of the fault.

31. (Previously presented) The method of claim 28 wherein the fault diagnoses include a likely cause of the fault.

32. (Previously presented) The method of claim 28 wherein said fault diagnoses include recommended remedial actions.

33. (Previously presented) The method of claim 28 wherein the fault relates to a technical product or technical service.

34. (Currently Amended) A computer implemented system for diagnosing a fault, the system comprising:

a knowledge base including a plurality of fault diagnoses and fault symptom queries, wherein each said fault symptom query includes potential responses and images that correspond to the potential responses;

a decision tree module including a decision tree having a plurality of decision points each corresponding to one of the fault symptom queries and a plurality of resolution points each corresponding to one of the fault diagnoses, wherein each said potential response in the decision tree indicates one of the decision points or one of the resolution points and one of said decision points is identified as a starting decision point; and

a user interface module in communication with said decision tree module, said knowledge base and a user access device, said user interface module including instructions to implement a method comprising:

designating the starting decision point as the next decision point;

transmitting the fault symptom query corresponding to the next decision point to the user access device;

receiving a reply including one of the potential responses;

continuing said transmitting the fault symptom query and receiving a reply until said one of the potential responses indicates one of the resolution points, wherein if said one of the potential responses indicates one of the decision points then said one of the decision points is designated as the next decision point; ~~and~~

transmitting the fault diagnosis corresponding to said one of the resolution points to the user access device; and

receiving all of the resolution points and comparing the fault diagnoses to illustrative images associated with each of the resolution points in order to traverse the decision tree.

35. (Currently Amended) A system for diagnosing defects in circuit boards, the system comprising:

a knowledge base including a plurality of fault diagnoses and fault symptom queries, wherein said fault diagnoses include diagnostic images, a description of the fault, and a likely cause of the fault, wherein each said fault symptom query includes potential responses and images that correspond to the potential responses, one of said fault symptom queries being determining a type of ~~void~~-defect, said images corresponding to said potential responses including a rim ~~void~~defect image and a resist plug ~~void~~defect image;

a decision tree module including a decision tree having a plurality of decision points each corresponding to one of the fault symptom queries and a plurality of resolution points each corresponding to one of the fault diagnoses, wherein each said potential response in the decision tree indicates one of the decision points or one of the resolution points and one of said decision points is identified as a starting decision point; and

a user interface module for providing customer support, said user interface module being in communication with said decision tree module, said knowledge base and a user access device, said user interface module including instructions to implement a method comprising:

designating the starting decision point as the next decision point;

transmitting the fault symptom query corresponding to the next decision point to the user access device;

receiving a reply including one of the potential responses;

continuing said transmitting the fault symptom query and receiving a reply until said one of the potential responses indicates one of the resolution points, wherein if said one of the potential responses indicates one of the decision points then said one of the decision points is designated as the next decision point; ~~and~~

transmitting the fault diagnosis corresponding to said one of the resolution points to the user access device, said fault diagnosis including said type of ~~void~~ defect; and

receiving all of the resolution points and comparing the fault diagnoses to illustrative images associated with each of the resolution points in order to traverse the decision tree.

36. (Previously Presented) The system of claim 35, wherein said instructions further comprise:

transmitting a recommended remedial action based on the fault diagnosis to the user access device.